## AMENDMENTS TO THE CLAIMS

- 1, 52 (Canceled)
- 53. (Currently Amended) A cross-linked polyether which is obtained by polymerizing a monomer of the general formula:

wherein

D is PEG, PPG, or poly(THF), and

C and E independently represent an electron withdrawing group, an electron releasing group, or a C<sub>1</sub>-C<sub>30</sub> aryl, wherein groups C, D, and E remain respectfully unchanged in every monomer polymerized.

- 54. (Currently Amended) The cross-linked polyether of claim 53, wherein the electron withdrawing group is halogen, formyl, ester, amide, ketone, nitro, sulfoxide, sulfonate, nitrile, aldehyde, or ketone.
- 55. (Currently Amended) The cross-linked polyether of claim 54, wherein the electron withdrawing group is alkyl aerylate ethyl formate or nitrile.
- 56. (Previously Presented) The cross-linked polyether of claim 53, wherein the electron releasing group is selected from the group consisting of  $C_1$  to  $C_{30}$  linear or branched alkyls,  $C_2$  to  $C_{30}$  linear or branched aralkyls,  $C_1$  to  $C_{30}$  aryls, ethers, and amines.
- 57. (Currently Amended) The cross-linked polyether of claim 53, wherein the monomer has the formula:

wherein the n is 1 to 100.

58. (Previously Presented) The cross-linked polyether of claim 57, wherein the monomer has the formula:

- (Previously Presented) The cross-linked polyether of claim 53, wherein the monomer is produced under Baylis-Hillman or Phase Transfer Catalyst (PTC) conditions.
- (Previously Presented) The cross-linked polyether of claim 58, wherein the monomer is produced under Baylis-Hillman or Phase Transfer Catalyst (PTC) conditions.
- 61. (Currently Amended) A method for preparing a cross-linked polyether, comprising the step of polymerizing a monomer of the general formula:

wherein

D is PEG, PPG, or poly(THF), and

C and E independently represent an electron withdrawing group, an electron releasing group, or a C<sub>1</sub>-C<sub>20</sub> aryl, wherein groups C, D, and E remain respectfully unchanged in every monomer polymerized.

- 62. (Currently Amended) The method of claim 61, wherein the electron withdrawing group is halogen, formyl, ester, amide, ketone, nitro, sulfoxide, sulfonate, nitrile, aldehyde, or ketone.
- 63. (Currently Amended) The method of claim 62, wherein the electron withdrawing group is alkyl aerylate-cthyl formate or nitrile.
- 64. (Previously Presented) The method of claim 61, wherein the electron releasing group is selected from the group consisting of  $C_1$  to  $C_2$  linear or branched alkyls,  $C_2$  to  $C_2$  linear or branched aralkyls,  $C_1$  to  $C_3$ 0 aryls, ethers, and amines.
  - 65. (Currently Amended) The method of claim 61, wherein the monomer has the formula:

$$C \nearrow O \nearrow D \nearrow D \nearrow E$$

## wherein the n is 1 to 100.

66. (Previously Presented) The method of claim 65, wherein the monomer has the formula: